FedEx Express EFVS NPRM Review Team comprised of Flight Operations and Aircraft Engineering personnel have reviewed the proposed NPRM and submit the following comments to Docket No. FAA-2003-14449, Notice No. 03-03, "Enhanced Flight Vision Systems," dated February 10, 2003.

§14 CFR 91.175(l)(4) should be revised as follows:

At 100 feet above the touchdown zone elevation of the runway of intended landing and below that altitude, either the flight visibility or enhanced flight visibility must be sufficient for the following to be distinctly visible and identifiable to the pilot without reliance on the EFVS to continue the approach.

This commenter requests clarification of the term "without reliance on the EFVS." Would this require turning off the EFVS?

EFVS is another form of vision and as such may be used during any phase of flight or operation in which its safe use has been established. EFVS may enhance flight visibility in a similar manner as landing lights, windshield wipers, or prescription glasses and as such should not be singled out for operational limitation. The EFVS usage should be at the pilot's discretion and treated in the same manner as other flight deck aides in that the pilot may turn on or off the EFVS image, as weather conditions affect performance, as his or her experience dictates to improve safety. Furthermore, if the EFVS allows for the pilot to clearly distinguish and identify prominent topographical objects by day or night that may or may not otherwise be visible, are consistent with the requirements of 14 CFR 91.175(c) and 121.651(c), and is safe, then by not utilizing it we may be contributing to unsafe flight operations. Thus, since EFVS is a fail passive system, the pilot would have to execute a missed approach procedure if the visual references are not present regardless of whether it was the result of loss of either natural vision or enhanced flight vision references.

EFVS operational limitations are more appropriately documented within the operator's Airplane Flight Manual (AFM) supplement.

§Page 6804, "Category II and Category III ILS approach procedures" should be revised as follows:

This proposed rule would not allow the use of an EFVS for Category II and III approach procedures only as an enhancement to maximize situation awareness. Proposed enhanced flight vision systems requesting credit for these approaches would have to comply with the more stringent reliability, redundancy, and other criteria, as prescribed in applicable sections of 14 CFR and applicable advisory circulars.

In the case of this commenter, EFVS is envisioned as an enhanced situation awareness tool that will be used in conjunction with flight guidance on a certified display to manually fly the aircraft on approach and departure in visual meteorological conditions down to Category I conditions. In Category II and III operations, a coupled autoland approach will be flown with a Category II/III certified aircraft, and the pilot will utilize the EFVS overlaid on flight guidance on a certified display to monitor the approach. Availability of EFVS imagery during these CAT II/III operations
would be for enhanced situation awareness and would not be used for guidance or to reduce minimums. Based on this architecture, the commenter takes exception to the proposed EFVS CAT II/III operational limitation and would argue that it would not require that the EFVS comply with more stringent reliability,

redundancy, and other CAT II/III criteria, as prescribed in applicable sections of 14 CFR and applicable advisory circulars.

Therefore, any such EFVS operational limitations are more appropriately documented within the operator's AFM supplement.

§14 CFR 91.175(l)(7)

The commenter requests the FAA clarify the meaning of the phrase "which is suitable for maneuvering the aircraft."

§14 CFR 91.175(m)(2) should be revised as follows:

The EFVS sensor imagery and aircraft flight symbology (i.e., at least airspeed, vertical speed, aircraft attitude, heading, altitude) are presented on a head-up display or other certified display so that they are clearly visible to the pilot flying in his or her normal position and line of vision and looking forward along the flight path; The display certification should determine whether the display can be used and it should not be limited to a head-up display only without further alternate display consideration.

§14 CFR 121.651(b), (c), (d)

The proposed language restricts EFVS technology potential that should be more appropriately addressed by certification not regulation. The pilot should be able to begin the approach based on having an EFVS that provides the appropriate visual references as delineated in 14 CFR 91.175(3) and (4). Furthermore, wording should be added to delete 14 CFR 121.651(b) if you have a certified EFVS.

§EFVS credit for lower minimums

As with any new aircraft system, EFVS operational experience must be documented prior to further consideration for EFVS credit for lower minimums. Any EFVS operational limitations should be documented within the operator's AFM supplement.

Should you require any additional information please do not hesitate to contact me.